

Notice of Allowability

Application No.

10/603,388

Examiner

Juan A. Torres

Applicant(s)

HEGDE ET AL.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment After Final, filed 11/20/2006.
2. ☒ The allowed claim(s) is/are 1, 3-14, 16-15 and 27-30. Renumbered 1-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 11/20/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Specification

The modifications to the specification were received on 11/20/2006. These modifications are accepted by the Examiner.

In view of the amendment filed on 11/20/2006, the Examiner withdraws the specification objections of the previous Office action.

Response to Arguments

Regarding claims 1, 13 and 25:

Applicant's arguments, see Amendment After Final, filed 11/20/2006, with respect to claims 1, 13 and 25 have been fully considered and are persuasive. The rejection of claims 1, 13 and 25 has been withdrawn.

Regarding claims 9, 16 and 17:

Applicant's arguments, see Amendment After Final, filed 11/20/2006, with respect to claims 9, 16 and 17 have been fully considered and are persuasive. The rejection of claims 9, 16 and 17 has been withdrawn.

Allowable Subject Matter

Claims 1, 3-14, 16-15 and 27-30 are allowable.

The following is an examiner's statement of reasons for allowance: claims 1, 3-14, 16-15 and 27-30 are allowed because the references cited fail to teach, as applicant has, estimating a sequence of symbols, wherein the symbols conform to predetermined valid symbol sequences, comprising forming at least two predetermined groups of valid sequences, wherein each group is formed based on possible initial states and includes

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all possible valid sequences originating from the respective initial states, receiving a set of symbol measurements, identifying a candidate sequence for each group of valid sequences, wherein the candidate sequence is a valid sequence from its respective group that is closest to the set of symbol measurements, where each candidate sequence has corresponding decision information, and wherein each candidate sequence is identified by forming a set of error metrics for each symbol in the set of received symbols, and using the sets of error metrics to select sequences in time-reverse order, and determining at least one output decision by selecting a group and corresponding decision information from the identified candidate sequence in response to candidate sequence selection information; and forming groups of paths through a trellis based on the initial states of the paths, forming sets of sequential samples of symbols, wherein the sets comprise at least a first set of samples and a next set of samples, for each set of samples, determining a plurality of minimum error paths and corresponding candidate decision information, wherein each group has a minimum error path and corresponding candidate decision information, selecting a group corresponding to the first set of samples and its minimum error path and its corresponding decision information, where the selection is based on prior state using at least a portion of the selected corresponding decision information to select a group corresponding to the next set of samples and its corresponding decision information, as the applicant has claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres
11-27-2006

TEMESGHEN GHEBREYESA
PRIMARY EXAMINER